

Duxbury Beach acts as barrier

One step further and beach could have been gone

By Sarah Love
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DUXBURY — Although the damage to Duxbury Beach seems unfathomable, one step further and it would have been gone.

This loss would not have just meant no tanning next summer, it would have eventually destroyed the bay coast.

"That's a barrier beach," said Joan Sundstrom, of Battelle Ocean Sciences on Washington Street. "It protects the inner harbor from wave action and erosion. If it's breached, it would be disastrous to all the property on the harbor."

Shawn Dahlen, conservation commission chairman, said Monday the entire beach, with the exceptions of High Pines and Plum Hill, were washed over. Between 90 and 95 percent of the vegetation was lost and "every primary dune" is gone.

"In some places there's as much as an eight foot drop in elevation." The critical thing, he said, was to prevent what happened in Chatham.

According to Sundstrom, a 1987 storm opened a breach in Chatham's barrier beach. The inevitable erosion following the breach has claimed several houses in Chatham and neighboring Cape Cod towns. Chatham's North Beach slowly, inexorably disappears.

A breach is where the barrier beach is cut entirely in half. When water can pass through at all parts of the tide, Dahlen said.

The devastation is so large because once a breach occurs the regular tides continue to wash away the sides causing the gap to constantly widen.

It was the embayment that

saved Duxbury's bay front homes from what the people of Gurnet Road are now facing.

Dahlen said the velocity zone, or the height of the water on the outer beach, is at a 22 foot elevation and in the embayment, or bay, it is 12 feet. If the two were to connect and the elevation to rise, Washington Street would be flooded by five to eight feet of water every time there is a storm.

"The damage would be extremely more severe," Dahlen said. "It's a huge differential in impact and that's why we're rushing to get it filled in."

The steps being taken now by the department of public works, army corps of engineers and beach reservation contractor Fred Nava and Sons, are to push the sand back to where it was originally and then, using the posts that did hold fencing as guides, put up the miles of snow fencing that once contained those dunes. As of Sunday, there were 32 front end loaders working to this goal.

The vegetation that once lined those dunes, American beach grass, Dahlen said, cannot be planted until spring.

With very little, if any, severe structural damage, homes on Gurnet and Saquish fared better than those on Gurnet Road.

The eastern cliffs of the Gurnet were reduced as much as 20 feet in some places. The rest of Gurnet and all of Saquish is "basically untouched," he said.

Saquish was saved because of "a very significant area of salt marsh," Dahlen said.

Salt marshes, he said, are the "primary storm damage prevention vegetation." When water hits the marshes, he said, it cannot develop and the force is taken by the marsh.

So because of these marshes Saquish was only subjected to "still water flooding," Dahlen said.

Beers said a beach reservation member estimated the cost of rebuilding the beach to be between \$3 million and \$4 million.

Beers said an 82-year-old man who has lived on the Gurnet 62 years said the storms effects were 20 times worse than those of the Blizzard of '78.

"In 1978 you were counting the (beach) sections that washed over," Beers said he was told. "Now we're counting the sections not washed over."

Even during the three days of planning prior to the storm, Beers said, no one could have imagined it would be as bad as it was.

"Who, in their wildest imagination, could have believed mother nature would unfurl this kind of fury," he said.

Driving along a new beach road created only since Thursday, Beers explained what lay all around him. Before the storm the beach was narrow and tall — now it is over 50 feet wider and at sea level.

"It blew the roof off Duxbury Beach and put it in Duxbury bay," Beers said. "I don't know if we'll ever get Duxbury Beach back the way we know it."

But the beach owners, the beach reservation, and its equipment, the army corp of

engineers and its equipment and all the town departments and their equipment are trying. All the work done Wednesday was again taken by the sea on Thursday. There had been no definition of beach and bay and, as of Sunday, the crews had plowed a road and were still rebuilding dunes.

The vegetation which once lined the road could be seen at low tide sitting on the bottom of the bay.

Despite it all, Beers said, "Duxbury Beach did one hell of a job" holding up. Because it is a barrier beach, it is the sole protection for the Duxbury coastline. Had the beach been breached, it would have changed the face of the Duxbury coastline forever.

Rep. Charles Mann, R-Hanson, spent three hours Thursday touring the Duxbury coastline, Groux said. He and Congressman Gerry Studds were able to get Duxbury on a list for state and federal aid, he said.

Governor William Weld, Lt. Governor Paul Cellucci and the assistant secretary of public safety flew over the beach Saturday.